



National Aeronautics and Space Administration
Lyndon B. Johnson Space Center
 Houston, Texas



Historic step

The silver anniversary of the Apollo 11 lunar landing is being celebrated throughout July. Calendar on Page 3.



All American

'American Heritage Day' celebration features music, food, fun and guest speakers. Story on Page 4.

Space News Roundup

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No. 26

Goldin says GAO station report validates NASA's work

Russian participation to provide more capability plus tangible, intangible savings

A report released by the Government Accounting Office confirms NASA's projected costs for the new International Space Station and proves the value of Russia's participation, Administrator Daniel S. Goldin said last Friday.

"This GAO report is a validation of what we've been saying for months—Russian participation in the space station is a good deal for the American taxpayer," Goldin said. "It will save hundreds of millions, if not billions of dollars. For the American taxpayer, it's a win-win situation.

More space station for less cost."

The GAO suggested that costs such as space shuttle fleet modifications, two additional shuttle flights and a contract between NASA and the Russian Space Agency were not included in NASA's cost analysis. The GAO report was announced by Sen. William Cohen, R-Maine, a space station opponent who had requested the study.

"For the most part, the only quibble we have with the GAO is a bookkeeping issue," Goldin said. "The fact is, every nickel is account-

ed for in the NASA budget, and Russian cooperation will not cost the U.S. taxpayer one penny more—in fact I believe it will save us billions."

The GAO report stated that about \$746 million from two extra shuttle flights should be scored against the \$2 billion in savings from Russian participation. Goldin's response was, "We're going to fly eight shuttle missions a year. The point is, the money for those flights is in the budget; there's no additional cost due to Russian cooperation.

GAO also stated that the \$400 million contract with the Russian Space Agency should be counted against the \$2 billion savings.

"My personal view," Goldin said, "is the opportunity to use Mir to develop some of our own operational procedures and to test hardware in the real space environment could save us billions in the long run. As our problems with the Intelsat satellite capture and repair mission proved, there's no place like space to test out your equipment before you commit it to flight.

"I'm particularly pleased with the GAO's positive assessment of how valuable the Russian contribution will be in terms of significantly improving the capability for science and engineering research. The report echoes what members of the Vest Committee said about the program. I see this report as further validation of the value the Russians bring to the Space Station program."

Goldin said the benefits of Russian cooperation include:

- The space station will be com-
- Please see **RUSSIA**, Page 4

NASA, Russian Space Agency sign compacts

NASA and the Russian Space Agency signed two significant documents last week that put United States and Russian space cooperation on a firm basis and underpin Russian participation in the International Space Station program.

NASA and RSA signed an "Interim Agreement for the Conduct of Activities Leading to Russian Partnership in Permanently Manned Civil Space Station" that provides for initial Russian participation in the International Space Station program. The Interim Agreement will govern Russian participation until an Intergovernmental Agreement and a NASA-RSA Memorandum of Understanding can be concluded.

"This interim agreement is an essential step toward Russia's full participation in the International Space Station project. Just as the race to the moon defined the Cold War competition between the superpowers, the space station will define a new era of peace and cooperation for the world," said NASA Administrator Daniel S. Goldin.

NASA and RSA also signed a separate \$400 million contract for Russian space hardware, services and data. Under this contract, NASA will purchase hardware and services from RSA and its subcontractors for approximately \$100 million per year through 1997 in support of a joint program involving the U.S. space shuttle and the Russian Mir space station. The contract also covers early International Space Station activities.

The interim agreement and \$400 million contract were separately signed by NASA Administrator

Please see **FACT**, Page 4



NASA Photo

STS-65 Mission Specialist Leroy Chiao, left, Pilot Jim Halsell, Payload Specialist Chiaki Mukai and Mission Specialist Don Thomas check out one of the slidewire baskets at Kennedy Space Center's Launch Pad 39A. The baskets are part of the pad emergency exit system, and the astronauts received training in their use during the recent terminal countdown demonstration test, a final dress rehearsal for the planned July 8 launch.

Shuttle managers give go-ahead for Columbia launch

Columbia was deemed ready for flight on STS-65 following a thorough review by shuttle managers last week, and the launch of the second International Microgravity Laboratory mission was set for 11:43 p.m. CDT July 8.

Commander Bob Cabana, Pilot Jim Halsell, Payload Commander Rick Hieb, Mission Specialists Leroy Chiao, Don Thomas and Carl Walz, and Japanese Payload Specialist Chiaki Mukai will fly to KSC on Tuesday morning to prepare for the launch.

STS-65 will feature around-the-clock operations in IML-2, with Cabana, Halsell, Hieb and Mukai on the red work shift and Chiao, Thomas and Walz on the blue work shift. Red shift members will keep Houston business hours, while the Blue shift will be on an overnight shift for local observers.

The crew will work on more than 80 investigations developed by 200 scientists worldwide using furnaces and other facilities to produce metal structures ranging from crystals to metal alloys and to look at the behavior of fluids in weightlessness.



NASA to televise images of Jupiter comet impact

NASA will televise a series of panel discussions and images as Comet P/Shoemaker-Levy 9 collides with Jupiter during the week of July 16-22.

The first fragment of the comet will strike Jupiter just before 3 p.m. CDT July 16 on the side of Jupiter facing away from Earth. Shortly afterward, the point of impact will rotate into view as the planet turns its face toward Earth.

Goddard Space Flight Center will set up a comet impact newsroom, which will be the central location for

coordinating coverage of observations and images from the worldwide network of ground-based observatories and spacecraft taking part in the NASA/National Science Foundation observing project. Scientists will be on hand at the newsroom to answer questions about the comet.

The first image of the impact area is expected to be available, following minimal processing, the evening of July 16. NASA will release the image in a live program broadcast from the Space Tele-

scope Science Institute, Baltimore, Md., about 9 p.m., but there will be no briefing at that time.

A full briefing will be conducted in the comet impact newsroom and carried live on NASA Select television at 7 a.m. July 17 and will include updated information about the first impact and an image of the collision.

Briefings will be held every day throughout the following week from Goddard Space Flight Center.

The briefing panels will include comet co-discoverers Eugene and

Carolyn Shoemaker and David Levy as well as scientists presenting images and information from the Hubble Space Telescope and other spacecraft. A roundup of observations from ground-based observatories around the world also is scheduled.

Comet impact briefings are scheduled to be held at 7 a.m. July 18, 19, 21 and 23; at 11 a.m. July 20; and at 8:30 a.m. July 22.

The briefing schedule may be affected by coverage of the STS-65 mission.

Ulysses starts primary mission at Sun

The Ulysses spacecraft became the first robotic exploration vehicle in history to reach a polar region of the Sun when it passed over the Sun's southern polar area last week after a journey of almost four years from Earth.

The spacecraft, built by the European Space Agency and deployed from the Space Shuttle *Discovery* in October 1990, will now climb to a position 70 degrees south of the Sun's equator to begin a four-month study of the complex force at work in the polar region.

In February 1992, Ulysses spent nearly 11 days exploring unknown regions of Jupiter before gaining enough momentum to loop out of the ecliptic and on an orbit that passes over the poles of the Sun.

Scientists are elated to be able, finally, to carry out observations in the Sun's polar regions, said U.S. Project Scientist Dr. Edward J. Smith of NASA's Jet Propulsion Laboratory. "We have been like explorers confined to travel near the Earth's equator without being able to journey to

the arctic regions."

"For a long time, we have suspected that much of the solar phenomena studied at, and near, the Earth was controlled by conditions in the Sun's polar regions," added Dr. Richard G. Marsden, ESA project scientist. "But never before have we been able to observe those processes."

The polar regions of the Sun—although mysterious in many ways—have long captivated scientists' interest.

"The existence of a global magnetic field means that the Sun has magnetic poles much like the Earth," Smith said. "However, the properties of the polar magnetic fields, which switch polarity every 11 years in conjunction with the sunspot cycle, are poorly understood."

A better understanding of the Sun's magnetic field will be important because magnetic fields play a key role in the physics of the Sun's outer atmosphere—called the corona—and its extension outward into space as the so-called solar wind.



Silver anniversary events recall Apollo 11

The upcoming silver anniversary of the lunar landing is fast approaching and a number of events are planned throughout the JSC area to commemorate the flight of Apollo 11.

A calendar of Apollo 11 anniversary events may be found on Page 3 of today's Space News Roundup.

Planned events offer a variety of activities from an evening of wine and celebration on board the Galveston Wine Train to Gov. Ann Richards presentation of a proclamation commemorating the Apollo 11 mission. Space Center Houston will continue its "Celebration 25" salute to Apollo with a "Blast to the Past" running from July 15-24.

The visitor center will be the site of several historical and educational

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JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Store from 10 a.m.-2 p.m. Monday-Thursday and 9 a.m.-3 p.m. Friday. For more information, call x35350 or x30990.

Apollo 11 Anniversary: The Apollo 11 Anniversary Splashdown Party will be held from 4:30-7:30 p.m. July 21 at the Gilruth Center. Tickets are on sale through July 15. Cost is \$3 per person.

Schlitterbahn Trip: Tickets available for July 23 trip to Schlitterbahn water park in New Braunfels. Day trip is from 7 a.m.-9:30 p.m. Cost is \$45 for adults and \$40 for children 3-11 years. Cost includes transportation, rides, attractions and buffet meal.

Six Flags: Tickets available for one-day weekend and weekday admission. Cost is \$20.95 for weekend and \$16.75 for weekday. Two-day admission, either weekend or weekday, is \$27.25.

Seaworld of Texas: Discount tickets: adult \$20.95; child (3-11), \$14.25.

Fiesta Texas: Discount tickets: adult \$18.95; child (4-11) and seniors (55+), \$14.25.

Splash Town: Discount tickets, \$11.05.

Waterworld: Discount tickets, \$10.50.

Astrorworld: Discount tickets: adult \$19.95; children under 54 inches tall, \$17.75.

Moody Gardens: Discount tickets for two of three different attractions: \$9.50

Space Center Houston: Discount tickets: adult, \$8.75; child (3-11), \$4.75; commemorative, \$9.55.

Metro tickets: Passes, books and single tickets available.

Movie discounts: General Cinema, \$4.75; AMC Theater, \$4; Loew's Theater, \$4.50.

Stamps: Book of 20, \$5.80

JSC history: Suddenly, Tomorrow Came: A History of the Johnson Space Center, \$11.

JSC

Gilruth Center News

EAA badges: Dependents and spouses may apply for photo identification badges from 7 a.m.-9 p.m. Monday-Friday; and 8 a.m.-4 p.m. Saturdays. Dependents must be between 16 and 23 years old.

Weight safety: Required course for employees wishing to use the weight room is offered from 8-9:30 p.m. July 14. Pre-registration is required. Cost is \$5.

Defensive driving: Course is offered from 8:15 a.m.-3 p.m. Saturday. Next class is July 9. Cost is \$19.

Aerobics: High/low-impact class meets from 5:15-6:15 p.m. Tuesdays and Thursdays. Cost is \$32 for eight weeks.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24 for eight weeks.

Aikido: Martial arts class meets from 5-7:30 p.m. Tuesdays and 6:15-8:15 p.m. Wednesdays. Black Belt class from 6-8 p.m. Fridays, requires instructor permission. Cost is \$25 per month. New classes begin the first of each month.

Country Dancing: Classes meet Mondays. Beginners class meets from 7-9 p.m.; advanced class meets from 8:30-10 p.m. Partners are required. For additional information, contact the Gilruth Center at x33345.

Softball Leagues: Registration for the 1994 Summer Softball Leagues will be July 12-15. Registration for Mixed C Recreational is 7 a.m. July 12; Men's C at 7 a.m. July 13; Mixed B and Men's B at 7 a.m. July 14; and Men's A and Men's Over 40 at 7 a.m. July 15. Non-badged teams will register at 4:30 p.m. July 15.

Sailing Club: Sailing lessons are planned for May and June. For information, contact Richard Hoover at x31360 or 996-7716.

Golf lessons: Lessons for all levels. Cost is \$90 for six weeks. For additional information, contact x33345.

Fitness program: Health Related Fitness Program includes a medical examination screening and a 12-week individually prescribed exercise program. For more information, call Larry Wier at x30301.

JSC

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be run only once. Send ads to Roundup Swap Shop, Code AP3, or deliver them to the deposit box outside Rm. 147 in Bldg. 2. No phone or fax ads accepted.

Property

Rent: Co condo, furn, sleeps 6, no smoking/pets, dily/wkly/mo. Bob, x30825 or 998-7372.

Lease: week vac, Sat to Sat, anywhere in U.S./some Foreign countries, depends when avail, \$350/U.S./\$450 Foreign, everything furn except food, x34354.

Sale: Mobil home w/pier on the Trinity River, \$57.5k. 334-3066.

Sale: Lake Houston, lake front property, 60x180. Raymond, 409-925-1468.

Rent: Galveston condo, furn, sleeps 6, Seawall Blvd & 61 st St, wkend/wkly/dly rates. Magdi Yassa, 333-4760 or 486-0788.

Sale: Pasadena, 4-2-2, formal DR/LR, 2,100 sq ft, \$78.5k. Tamela, x36155 or Cindy Cole, 479-6489.

Rent: Galveston beach house, dily/wkly, cent air, furnished. Ed Shumliak, x37686 or 326-4795.

Sale: Galveston beach house, 3-2, cent air/heat, furn. Ed Shumliak, x37686 or 326-4795.

Lease: Condo, 1 bdr, W/D, FLP, sec alarm, appl, cov'd parking, upstairs. Jim Briley, 244-4632 or 488-7907.

Sale: Friendswood, 4-2-2, 2100 sq ft, all brick. 1/2 ac, new roof, \$123.5k. Mark, x38013 or 992-4132.

Lease: Wedgewood Village, Friendswood, 3-2-5-2 home, both formal, WB/FPL, ceiling fans, len yard, avail 7/1, no inside pets, \$825/mo. Gretchen, 282-3558 or 482-0874.

Sale: Forest Park East, 6 cemetery spaces, \$5.9k, indiv. 488-7852.

Sale: Friendswood/Sun Meadow golf course, WB/FPL, 2000 sq ft. Sharon, 996-1711.

Lease: Townhouse, CLC University Place, 1327 sq ft, 2-2-5-2, A/C, FPL, W/D, refrig, no pets, \$850/mo. 488-1036.

Sale: Condo, BayWind I, 2-1-5, ex cond, ground floor, W/D, \$35k. 333-3992.

Lease: Condo, CL, 2-1, pool, security, \$650/mo + util. 480-5583 or 482-7156.

Cars & Trucks

'82 Dodge Stakebed, Dot inspected, new tires/trans & sideboards, \$2.5. 485-7274 or 639-5200.

'91 Honda Prelude SL, 28.5k mi, Cupp brown, ex cond, \$13k. Lynn, x34716.

'88 Ford Tempo, black, 4 dr, pwr locks/doors, A/C, auto, AM/FM, \$3k firm. 481-0695.

'90 Ford F350 Dually supercab, 7.3 liter diesel, 58k mi, new paint, new tires, \$13.5k. Daisy, 280-8383 or 409-925-2944.

'81 Olds Cutlass Supreme, 2 dr, v8 89k mi, \$1950. x48646 or 474-3668.

'85 Ford LTD Brougham, silver, 65k mi, auto, pwr Nathan, x3408 or 332-9382.

'88 Plymouth Caravelle, \$1.2k OBO. 916-0717.

'90 Le Baron convertible, red w/white top, grey velour int, ex cond, \$9990. 480-9102 or 612-1135.

'89 VW Fox GL Sport, 4 dr sedan, 5 spd, A/C stereo tape, 66k mi, red ext/gray back int, ex cond, \$3.5k. 341-9222.

'90 Pontiac Subird LE, 2 dr coupe, red ext/gray int, 5 spd, AC, tilt, stereo tape, ex cond, \$3.7k. 341-9222.

'92 Ford Explorer XLT, blue/silver, pwr, ex cond, 31k mi, \$17.3k. x37598 or 333-9777.

'87 Mustang LX w/GT package, 5.0 auto trans, A/C,

AM/FM/cass, new tires, \$4.8k. Cathy, x36163.

'84 Mercury Capri, rebuilt engine, standard, good condition, \$1.5k. 946-3408.

'86 Toyota SR5 pickup parts, hood & right fender, \$100. Clawson, x35130 or 484-1538.

'79 Volvo 244DL, 4 dr, auto, PS/PB, sunroof, new brakes, AC needs work, \$1k. Karl, x48407 or 992-8574.

'91 Geo Metro, 4 dr, 5 spd, red 23.5k mi, A/C, AM/FM, ex cond, \$4.8k. bob, 282-4510 or 482-5984.

Boats & Planes

Alum 12', 5 hp motor, galva trlr, seats, oars, gas tank, & anchor. \$750. x30079 or 332-6302.

Sea Ray Cuddy cruiser, 22.5', 228 hp I/O, new Alpha One, VHF, color Furuno depth sounder, \$6.5k. Mark, x38013 or 992-4132.

Alum 14', v-bottom jon boat, w/trlr, \$200. Sean, 244-6170.

'92 Baymaster 18'6", 115 hp Johnson, detach trlr, Motorguide Salt Water trolling motor, fish finder/depth sounder, \$10.5k. Steve, x47698 or 482-3696.

Sportsman boat trailer, 18' galv, \$375; 16' RMC fiberglass boat, \$100. 534-2668.

Sears alum 17' canoe, paddles, liveest, \$600. 282-6975.

Cycles

'74 Yamaha DT175, dirt/road cycle, does not run, \$50. 335-2539 or 474-2368.

'91 Kawasaki KX250 & '91 Kawasaki KX 60 both emaculate, lots of extra parts & gears, must sell. x35710.

Audiovisual & Computers

Bondwell B310 Laptop PC 286, monochrome LCD w/40 MEG HD & 1.44 FD, Docs, orig disk, mouse, case, spare batteries, \$400. Chris, x30794 or 280-8921.

Commodore 64, ex disk drive & Keyboard, color monitor, lots of software, \$150 OBO. 538-2169.

Macintosh Ixci computer w/mouse 5/80, \$750 OBO w/keyboard & monitor, \$1.1k. Greg, x48382 or 474-9105.

IBM PS2 Model 25 8086 CPU & monitor, \$50; 2400 baud internal modem, \$25; Epson LQ1050 24 pin printer, \$75; MS Works, \$40; MS Office, \$45; MS DOS 6.2.1, \$50. Kelley, x36818 or 488-8194.

Fisher amplifier & equalizer, AM/FM tuner, twin cassette player, turntable, twin speaker system, stereo cabinet, \$150. Jack, x33741 or 488-1222.

IBM PC game software, recent titles, orig disks, documentation. John, 333-7148.

Compaq Deskpro XT, \$150; HP laserjet printer, ex cond, \$375. Tammy, x32593 or 534-3293.

Nintendo games, Tetris, Genies II, Dream Masters, Super Mario 2, and many more, \$15/ea. Marie, 992-5535.

Denon recver, 40 watt, all audio/video inputs, professional quality, ex cond, \$125. Don, 282-6811 or 532-1361.

Pioneer CS-88 speakers, \$100/pr. x36813.

Photography

Bronica SA-2 Med format 6x6 cm Camera, Sa 12 Back, 50mm, 80mm, 135mm Carl Zeiss lenses, \$1k. Kevin, 333-3705 or 538-3141.

Binoculars, Celestron Ultima 10x50 astronomical quality, ex cond, \$175. Cliff, x40230 or 534-4145.

Edmund Scientific 4 1/2" reflecting telescope w/various eye pcs. tripod, \$75. 282-6975.

Music

Alvarez-Yairi guitar, jumbo acoustic guitar w/lots of pearl & abalone inlays, hardshell case, \$850. Brad, x37653 or 488-4989.

JSC

Dates & Data

Today

Cafeteria menu — Special: baked meatloaf. Total Health: light macaroni and cheese. Entrees: baked scrod with Hollandaise, broiled chicken, pork and beef egg rolls, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: stewed tomatoes, seasoned spinach, cut corn, macaroni and cheese.

Monday

Independence Day — Most JSC offices will be closed in observance of the Independence Day Holiday.

Cafeteria menu — Special: Italian cutlet. Total Health: roast beef au jus. Entrees: chicken a la king, enchiladas with chili, baked lasagna with meat, steamed fish, French dip sandwich. Soup: split pea and ham. Vegetables: Brussels sprouts, oriental vegetables, buttered carrots, lima beans.

Tuesday

Cafeteria menu — Special: stuffed cabbage rolls. Total Health: roasted turkey. Entrees: turkey and dressing, country style steak and hash browns, beef ravioli, baked chicken, French dip sandwich. Soup: tomato Florentine. Vegetables: Italian blend, okra and tomatoes, corn cobbette, navy beans.

Wednesday

Cafeteria menu — Special: pepper steak. Total Health: stir fry pork with rice. Entrees: liver and onions, catfish and hush puppies, stir-fry pork with rice, steamed fish, Reuben sandwich. Vegetables: steamed broccoli, yellow squash, macaroni and cheese, vegetable sticks.

Thursday

Cafeteria menu — Special: chicken fried steak. Total Health: fat-free

vegetable soup. Entrees: beef tacos, scrod with Hollandaise sauce, steamed fish, French dip sandwich. Soup: navy bean. Vegetables: spinach, cut corn, breaded okra, pinto beans.

Friday

Cafeteria menu — Special: tuna noodle casserole. Total Health: steamed salmon steak. Entrees: steamed salmon steak, roast beef, baked chicken, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: French cut green beans, cauliflower with cheese, green peas, black-eyed peas.

July 13

Future Fighters — The Space Station Future Fighters (formerly Space Station *Freedom* Fighters) will meet at noon and 5 p.m. in the meeting room at the Freeman Memorial Library on Diana St.

PSI meets — The Clear Lake/NASA Area chapter of Professional Secretaries International meets at 5:30 p.m. July 13 at the Holiday Inn on NASA Road 1. For additional information, contact Elaine Kemp, x50561 or Diana Peterson, x30390.

July 15

American Heritage — American Heritage Day will celebrate JSC's global community from 3-8 p.m. July 15.

July 16

Scholarship banquet — The Society of Mexican-American Engineers and Scientists will host its 11th annual scholarship banquet at 7 p.m. July 16 at the University of Houston Hilton Hotel. Richard Tapia of Rice University will be the featured speaker. For more information, contact Mike Ruiz, 483-

8169 or Ponte Moreno, 333-6753.

July 21

Apollo anniversary — A 25th anniversary splashdown party is planned from 4:30-7:30 p.m. July 21 at the Gilruth Center. Cost is \$3 per person. Tickets may be purchased at the Bldg. 11 Exchange Store through July 15. Requests for specially designated reunion areas should be made to x34322.

August 10

PSI meets — The Clear Lake/NASA Area chapter of Professional Secretaries International meets at 5:30 p.m. Aug. 10 at the Holiday Inn on NASA Road 1. For additional information, contact Elaine Kemp, x50561 or Diana Peterson, x30390.

Sept. 5

Labor Day — Most JSC offices will be closed in observance of the Labor Day Holiday.

Sept. 14

PSI meets — The Clear Lake/NASA Area chapter of Professional Secretaries International meets at 5:30 p.m. Sept. 14 at the Holiday Inn on NASA Road 1. For more information, contact Elaine Kemp, x50561 or Diana Peterson, x30390.

Oct. 10

Columbus Day — Most JSC offices will be closed in observance of the Columbus Day Holiday.

Oct. 12

PSI meets — The Clear Lake/NASA Area chapter of Professional Secretaries International meets at 5:30 p.m. Oct. 12 at the Holiday Inn on NASA Road 1. For additional information, contact Elaine Kemp, x50561 or Diana Peterson, x30390.

Swap Shop

Passport Trax for Windows, MIDI music sequencer, \$50. David, x36427.

Pets & Livestock

Double Yellow Head Amazon parrot, female; Cockatill, both talk, \$925/both. Donna, 538-1401.

Blue/gold Macaw, \$1k; Lesser Sulfur Crested cockatoo, \$1k; Mealy Amazon, \$750, cages included. x49247 or 332-9720.

Reg Norwegian Elkhound puppies, 13 wks, wormed & shots, 2 m, 1 fem, \$250/ea. Don, x45907 or 331-2985.

Cocker Spaniel puppies, AKC, 1st set of shots, \$200/ea. Tamela, x36155 or Tanya, 479-0297.

Free kittens, 2 manx, 1 w/tail. x38138 or 5591437.

Free, semi-long hair female tabby, spayed & declawed, brn/blk. x48640 or 332-9720.

Free Greyhound, Greg, x48302 or 474-9105.

Lost & Found

Found battery outside Bldg 10, call to claim. Mark, x30918.

Household

Cookware, 20 pcs, 18/8 stainless steel, 5-ply Strata Thermo, heat resistant handles, \$400. 489-4558 or 639-3138.

Brown vinyl sofa & loveseat w/oak arms & legs, \$225; Magnavox console, \$100. x34354.

Formal dining room table & chairs, dark oak, 40" x 60" 84" w/2 leaves, 2 arm chairs/4 side chairs, new cond, new, \$2k, sell \$850. Mark, x38013 or 992-4132.

Extra long single waterbed w/wheats, storage beneath, \$70. Doris, x37545 or Bruce, 333-2373.

Maytag Frostfree refrig, new, 19 cu, almond, top & bottom doors, \$350. x38972 or 488-7380.

Kenmore electric dryer, large capacity, 4 cycles, \$100. John, x45684 or 992-9013.

Kenmore W/D, \$50/ea; mini-fridge, \$50. 532-2082.

Hotpoint upright freezer, \$50. x31484 or 280-8563.

Black lacquer coffee table & 2 end tables, good cond, \$125 OBO. Tom, x36309 or 474-9747.

Sectional sofa, 5 pcs, ex cond, 1 tan, 2 recliners, \$500. Ed, x49847 or 335-4404.

Refrigerator, \$100; dresser, \$50. 332-6305.

RCA color TV, solid wood console, 27", new \$950 sell \$600 OBO, official sz pool tabke, needs new felt, \$800 OBO. Diane, x47129.

Cherrywood desk/lateralfile/bookshelf, \$425; 3 dwr lateral file, \$70; oak dining table w/6 chairs, \$325; solid oak entertainment center, \$750. 698-0797.

Sofa country blue w/liny peach flowers, \$300; 2 tan wing back chairs, \$150; dining table w/4 chairs, \$100; oak entertainment center, \$150. Glori, x31891 or 538-2283.

On sz soft-side waterbed w/mattress/liner/heater, frame, ex cond, \$100. Karl, x48407 or 992-8574.

Dresser 9 dwr, no mirror, \$50; table w/6 chairs, hutch, \$1.8k. Tony, x35966.

Wanted

Want personell to join VPSI van pool, depart Meyerland Park & ride at 7:05 am for JSC, vanpool consist of on-site personell working 8 am/4:30 pm shift, have 14 good members, looking for 2 to 3 more. Travis Moebes, x45765 or Don Pipkins, x35346.

Want inexpensive car or truck, some repairs ok. 771-0955.

Wanted female Doberman puppy. Fran, 333-6277 or 339-3562.

Want to buy '78 thru '82 Honda Accord, Dead or Alive. 867-8820.

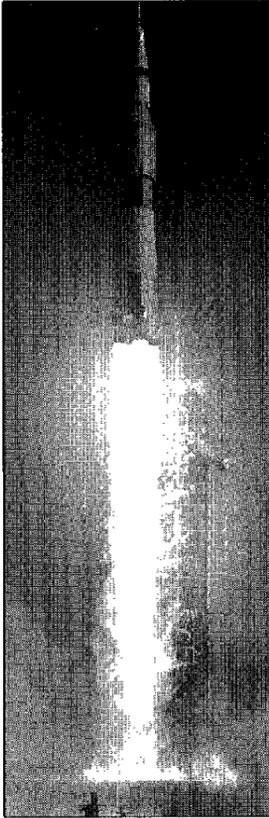
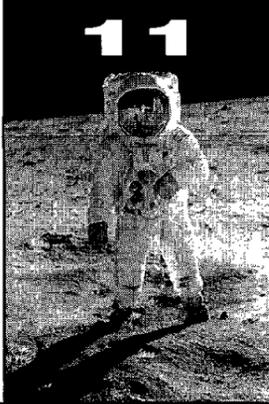
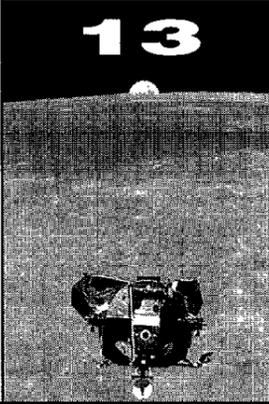
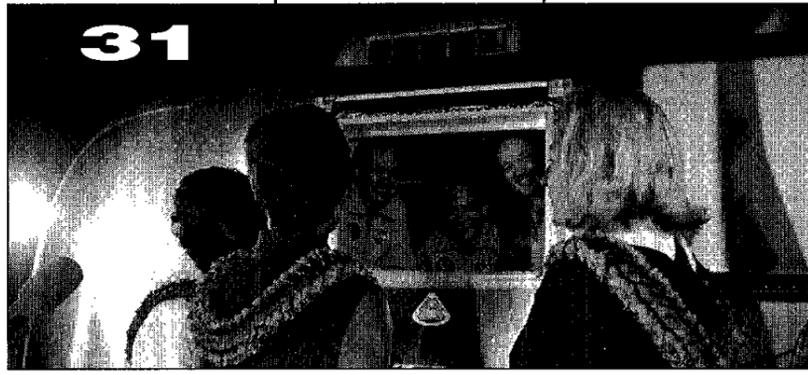
Want non-smoking housemate to share 4-2-5-2, Kemah, no pets, \$350/mo + 1/2 util +dep. Jeri, 333-7552.

Want considerate, responsible, nonsmoking house-

mate to share 3-2-2, Bay Glen/CLC, \$300/mo + \$200 dep, +1/2 util. Larry,

Apollo 11 25th Anniversary Events

Several events are being planned to celebrate the 25th anniversary of the first lunar landing. This calendar presents a partial listing of activities for the month of July. In parentheses next to the event are the initials of the hosting organization. Below the calendar is a list of all the host organizations and a phone number to contact for additional information.

J U L Y 1 9 9 4						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	
	4	5	6	7	8	9
10		12		14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		30
31						

For additional information, contact:

LRF	Lunar Rendezvous Festival	Diana Dornak	332-1541
LRF/L	Lunar Rendezvous Festival & Loral	Diana Dornak	332-1541
JSC/SIA	JSC & Spaceweek International Association	James Hartsfield	483-4934
NARAM	National Model Rockets	Terry White	587-0226
SCH	Space Center Houston	Gwen Griffin	244-2105
SIA	Spaceweek International Association		333-3627
SIA/CH	Spaceweek International Association & Challenger Centers	Mike Flory	261-6340

Pact sets Russian role in station management

(Continued from Page 1)

Daniel S. Goldin and RSA Director General Yuri Koptev at a formal signing ceremony in Washington D.C. at the conclusion of the U.S.-Russian Joint Commission on Economic and Technological Cooperation meeting presided over by Vice President Gore and Prime Minister Chernomyrdin.

The agreement establishes, among other things, a NASA/RSA Program Coordination Committee that will review design and development activities during this initial

cooperation. It also provides for RSA's participation on the Space Station Control Board, along with the other partners, which controls the space station requirements, configuration, and interfaces through the completion of assembly and initial operational verification. RSA also will be included in the Multilateral Coordination Board which ensures coordination of the operation and utilization activities of the station.

The contract expands on an ongoing cooperative program under the Human Space Flight Agreement,

concluded in 1992, which provides for a U.S. astronaut flight on Mir for three months and a space shuttle to dock with Mir in 1995. Key elements of the \$400 million contract include:

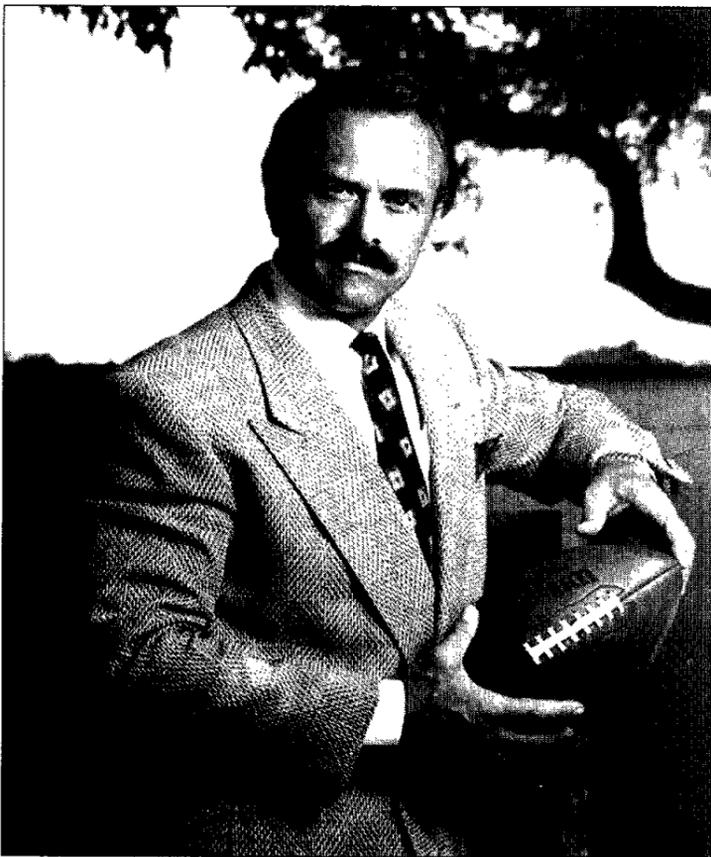
- U.S. astronauts spending up to 21 additional months on Mir, giving a new generation of American astronauts and scientists their first experience with long-duration space flight;
- Shuttles docking up to nine more times with Mir, delivering astronauts and research instruments. NASA will gain fundamental experience in joint operations such as risk reduction,

command and control, docking the shuttle with large structures in space, performing technology experiments, and executing a research program;

- A joint research program on Mir, including astronauts and cosmonauts and U.S. and Russian tests;
- Russians providing flight-proven equipment, including docking mechanisms for use with Mir and the International Space Station;
- Joint development of Solar Thermal Dynamics, a newer and more efficient way to generate

electrical power in space;

- Joint technology demonstrations of systems that may be used on the International Space Station;
- Demonstrations of joint operations such as space walks;
- Up to \$20 million to support Russian scientists engaged in joint scientific and research programs to support science, technology and engineering on board Mir; and
- Initial development funding for the FGB module that NASA will purchase for use on the International Space Station.



OVERCOMING CHALLENGES — Rocky Bleier, former running back for the Pittsburgh Steelers, will share his inspiring story about overcoming physical challenges when he speaks to JSC employees at the July 15 American Heritage Day activities. American Heritage Day activities begin at 3 p.m. July 15 in Teague Auditorium.

Celebration focuses on unity, pride

By Eileen Hawley

The rich cultural diversity of the JSC community will be on display July 15 during American Heritage Day activities.

"American Heritage Day offers us the chance to celebrate our similarities and our differences," said JSC Director Dr. Carolyn Huntoon. "JSC's strength is its family of employees, and this event will help us understand the events that shaped our past as we face our future together."

In addition to honoring the global nature of JSC's population, American Heritage Day will recognize the July 4 Independence Day holiday, and the 30th anniversary of the passage of the Civil Rights Act on July 2. A wide variety of entertainers and speakers will be featured throughout the afternoon.

The celebration will begin at 3 p.m. outside Teague Auditorium with music and a traditional dance performed by native Americans. Children from JSC's Child Care Center will recite the Pledge of Allegiance following the presentation of the colors at 3:30 p.m. Huntoon then will welcome employees and introduce the special guests speakers.

At 4 p.m., Dr. John Q. Taylor King, chancellor and president emeritus of Huston-Tillotson College, will remember the struggle for civil rights

waged during the 1960's. King joined Huston-Tillotson College as a professor in 1947. He served as dean of the college for five years and was appointed president in 1965 and chancellor in 1987. Now retired, King serves as director and chair of the Center for Advancement of Science, Engineering and Technology, a research arm of the college.

King also is a well-known author, collaborating on several text books and technical and religious articles as well as co-authoring two books with his wife — *Stories of Twenty-Three Famous Negro Americans* and *Famous Black Americans*.

Following King's speech, former Pittsburgh Steelers running back Rocky Bleier will challenge employees to strive for success.

Bleier is best remembered for his heroics on the football field where his dramatic endzone catch during the 1979 Superbowl, helped clinch the Steelers' third Superbowl title. But Bleier faced many other challenges in his life, including his struggle to walk following severe injuries sustained during combat duty in Vietnam.

Bleier is active in the National Multiple Sclerosis Society, the Special Olympics and is a board member of the Vietnam Veterans Memorial Fund. Bleier will speak to

employees beginning at 4:30 p.m. in Teague Auditorium.

The celebration then will move outside where a display of ethnic and cultural art will highlight the varied heritages that JSC employees bring with them to the global community.

"We want everyone to have an opportunity to enjoy the unique mixture of cultures that we call 'American,'" said Estella Gillette, acting director of Equal Opportunity Programs. "This display of art is one way to showcase the history of our workforce."

Employees interested in displaying their ethnic crafts at American Heritage Day should contact Fran Magers, x34847, or Diana Peterson, x33077.

Entertainment also varies from culture to culture and a number of performers will display their talents. Mariachis will provide a Hispanic flair, while rhythm & blues music will pay tribute to the soul of American music. Ethnic dancers and musical groups also may appear during the afternoon as employees wander through the celebration which will take place in the mall area behind Bldg. 1.

Food and non-alcoholic beverages will be provided. Several shuttle astronauts also will be signing autographs throughout the celebration.

Total Health unveils 'Desk-Top Lunch'

JSC's Total Health Program is taking another step toward helping JSC employees live a healthy lifestyle with the introduction of the new "Desk-Top Lunch."

Beginning Aug. 1, the low-calorie, low-fat meals will be added to the regular lunch fare at the Bldg. 3 cafeteria.

"All of these meals have been specially prepared to offer employees a well-balanced, healthy meal," said JSC dietician Cindy Yuan. Yuan designed 10 menu items that will be sold a la carte at the Bldg. 3 cafeteria. Employees can enjoy the meals in the cafeteria or take the pre-packaged items back to their offices.

"We developed the idea of the 'Desk-Top Lunch' in response to recent survey results," said Larry Wier, Total Health Program manager. "About one-half of JSC

employees indicated they eat lunch in their offices. We wanted to offer them a healthy choice when eating in the office."

The initial main course offerings in the Desk-Top Lunch program include chicken fruit salad in a pita; stuffed tomato with tuna salad; ranch cottage cheese; oriental chicken sandwich; roast beef sandwich; and a tri-plate. Three salads — corn relish, carrot raisin and marinated broccoli and cauliflower — will be offered along with an apple raisin muffin.

The "Desk-Top Lunch" will be available from 9 a.m.-1 p.m. every day in the Bldg. 3 cafeteria.

For additional information, contact the Total Health Program at x30301.



total health

Silver anniversary events plentiful

(Continued from Page 1)

retrospectives of the Apollo 11 mission. On July 16, former NBC television anchor Jim Hartz will host an evening with special guests astronaut Walt Cunningham, and author Andrew Chaikin. Musician and space program enthusiast John Denver also will appear at Space Center Houston.

Also on July 16, the younger set will have an opportunity to meet "Cookie Monster" at Space Center Houston's Zero-G Diner from 9-11 a.m. and 12-2 p.m. The Children's Television Workshop also will present a Sesame Street Live performance with Luis and Cookie Monster at 11 a.m.

Loral and the Lunar Rendezvous Festival will sponsor the 16th annual Lunar Rendezvous Run beginning at 8 a.m. July 16 at the Gilruth Center and continuing through JSC. The 5K run and 2-mile walk will cause the closure of several JSC roads and employees planning to work that morning may be affected. Second Street from the Gilruth Center to Avenue B as well as portions of Avenue B and Fifth Street will be closed from 7:15-9 a.m. while the race is in progress. In addition,

Avenue B from Second Street to just past the Thermochemical Test Area may be affected by the race, although the road will remain open. Entry fee is \$12 if the application is postmarked by July 10 and \$12 through race morning. Applications are available at the Gilruth Center. For more information, contact Len Topolski, 333-5576.

On July 19, a flight director panel will discuss the Apollo 11 mission. Panel members include Gerry Griffin, Gene Kranz, Glynn Lunney and Milt Windler.

On July 20, Gov. Ann Richards will present NASA Administrator Daniel Goldin with a proclamation commemorating Apollo 11.

Spaceweek International and the Challenger Centers will sponsor a baseball game between the Houston Astros and former astronauts on July 20 at the Astrodome.

JSC will host a "splashdown" party in the tradition of the Apollo era July 21 at the Gilruth. The party will run from 4:30-7 p.m. and all JSC civil service employees, retirees, and NASA-badged contractors may attend. Contact Community Affairs, x34322 to request a special reunion area.

Space News Roundup

The Roundup is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every Friday by the Public Affairs Office for all space center employees.

Editor Kelly Humphries
Associate Editor Kari Fluegel
Associate Editor Eileen Hawley

Fireworks forestall next Roundup edition

Due to Monday's Independence Day holiday there will be no Space News Roundup published on July 8.

Publication of the Space News Roundup will resume with the July 15 issue. In the meantime, the Daily Space Fax Roundup and the recorded Employee Information Service (x36765) will cover breaking news, including the planned July 8 launch of *Columbia* on STS-65.

Organizations interested in being added to the Daily Space Fax Roundup distribution list should call Kelly Humphries, x45050.

Russia bringing much experience

(Continued from Page 1)

pleted 15 months earlier, will have nearly double the volume, double the power, twice as many research modules and a larger crew;

- Flight-proven space hardware which would cost the United States billions to develop; and

- Access to Mir for collecting valuable science; checking out hardware, and obtaining early operational experience, which reduce risk.

"The Russians bring flight-proven hardware to the program, and they have vastly more experience in long duration flight than the U.S., which will be of tremendous benefit to the International Space Station partnership," Goldin added. "They have operated seven space stations and have three times (27 man-years) the experience on orbit."

He said that while there are tangible benefits to Russian cooperation, which the GAO report fairly and accurately points out, auditors cannot put a price tag on the intangible benefits of international cooperation.

"It's good foreign policy, and it's good space policy," he said.



JSC Photo by Bill Blunck

ERGONOMIC EXERCISES—Sean Keptra, left, and Sharon Brideno of Kelsey Seybold and J. Paul Teel of Body Built Seating take a look at an ergonomic computer workstation, complete with a keyboard wrist pad and ergonomic exercise software, at last week's Total Health Ergonomics Fair in the Gilruth Center ballroom. The software is designed to pop up at user-identified intervals. Nearly 300 JSC employees dropped by to get information on products designed to make them more productive by increasing their desk-job comfort level.